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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,294	12/17/2001	Donald Norman Spitz	2001-0617.00	7667

7590 02/13/2003

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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,294

Applicant(s)

SPITZ ET AL.

Examiner

Leonard S Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 8, 18, and 29 are objected to because of the following informalities:

Claims 8, 18, and 29 state "The maintenance station/printer wherein said opening includes at least one substantially vertical slot, said chimney having at least one substantially vertical rib, each said rib being received in a corresponding said vertical slot." This is grammatically incorrect. It will be construed that the claim should state "The maintenance station/printer wherein said opening includes at least one substantially vertical slot, said chimney having at least one substantially vertical rib, **each** rib being received in a **corresponding vertical** slot."

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

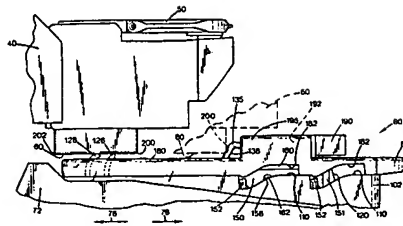
The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 11, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Johnson et al (US Pat 6402290).

Johnson et al discloses:

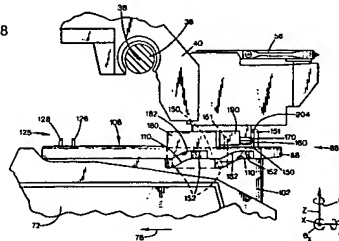
- {claims 1 and 22} A maintenance station for a printer (column 1, lines 8-15); a fixed support housing (figure 7, reference 102);

FIG. 7



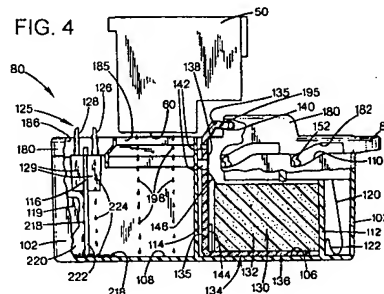
a sled (figure 7-8, reference 150);

FIG. 8



a spit containment device (figure 4, 8, reference 108)

FIG. 4



3. Claims 2-10, 12-20, 23-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al (US Pat 6402290) in view of Lou et al (US Pat 5997128).

Johnson et al discloses:

- {claims 1 and 22} a maintenance station (as taught in claims 1 and 22 above)
- {claim 11} ink jet printer (as taught in claim 11 above)
- {claims 3, 13, and 24} support housing is coupled to the spit containment device (figure 4, reference 102, 108)
- {claims 4, 14, and 25} the coupling of the support housing to the spit containment device prevents the spit containment device from moving in the vertical direction relative to the support housing (figure 4, reference 102, 108)
- {claims 5, 15, and 26} the support housing includes at least one substantially horizontal slot (figure 8, reference 182), the spit containment device having at least one projection received in the at least one slot (figure 8, reference 108, 182)
- {claims 6, 16, and 27} the slot is substantially parallel to the horizontal direction (figure 8, reference 78, 182)
- {claims 7, 17, and 28} the sled includes an opening (figure 8, reference 182), the spit containment device being received in the opening (figure 8, reference 108, 182)
- {claims 8, 18, and 29} the opening includes at least one substantially vertical slot (figure 8, reference 182; slot indicated by reference 182 has both substantially horizontal, as well as substantially vertical portions), the spit containment device having at least one substantially vertical rib (figure 8, reference 152), the rib being received in the vertical slot (figure 8)
- {claims 9, 19, and 30} printhead cap (figure 8, reference 170); printhead wiper (figure 8, reference 126, 128)
- {claims 10, 20, and 31} the spit containment device is disposed adjacent to a printhead wiper (figure 4, 8, reference 108, 126, 128)
- {claim 11} ink jet printer (column 1, lines 8-15); printhead (figure 4, reference 60); maintenance station (as taught in claim 1)

Johnson et al differs from the claimed invention in that it does not disclose:

- {claims 2-5, 7-8, 10, 12-15, 17-18, 20, 23-26, 28-29, 31} the spit containment device comprises a chimney

Lou et al discloses:

- {claims 2-5, 7-8, 10, 12-15, 17-18, 20, 23-26, 28-29, 31} the spit containment device comprises a chimney (column 2, lines 6-10)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the chimney disclosed by Lou et al into the invention of Johnson et al. The motivation for the skilled artisan in doing so is to gain the benefit of collecting spit ink below other service station components (column 2, lines 6-10).

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al (US Pat 6402290) in view of Lou et al (US Pat 5997128), as applied to claim 12 above, and further in view of Vega et al (US Pgpbl 20020158941).

Johnson et al in view of Lou et al differs from the claimed invention in that it does not disclose that a gap between the chimney and the printhead is not greater than approximately 1.0 mm when the chimney receives the ink spit from the printhead.

Vega et al discloses, with respect to claim 21, reducing spitting distance to 1.0 mm (page 4, column 1, paragraph 56; page 5, column 1, paragraph 56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Vega et al into the invention of Johnson et al in view of Lou et al so that the spitting distance is reduced to 1.0 mm. The motivation for the skilled artisan in doing so is to gain the benefit of efficiently reducing aerosol effect (page 5, column 1, paragraph 5). The combination naturally suggests that a gap can be configured between the chimney and the printhead so that it is not greater than approximately 1.0 mm when the chimney receives the ink spit from the printhead.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Murcia et al (US Pat 6203135) discloses an independent servicing of multiple inkjet printheads. Taylor et al (US Pat 5680162) discloses multiple chimneys for ink jet printer. Fahy (US Pat 5627574) discloses a maintenance device in an ink jet printing apparatus. Anderson et al (US Pat 6318838) discloses a non-fibrous spittoon chimney liner for inkjet printheads. Youn (US Pat 5946009) discloses a service station for ink-jet printer. Nguyen et al (US Pat 5997126) discloses a removable service station sled for inkjet printer. Garcia et al (US Pat 6042216) discloses a replaceable servicing module with multiple functions.

Lim (US Pat 6322196) discloses an inkjet service station and method of using same.

Bailey et al (US Pat 6315386) discloses an ink jet maintenance station having acoustic dampening.

Lee (US Pat 5847728) discloses a service station device in inkjet printer head.

Eckhard et al (US Pat 6464327) discloses a replaceable snout wiper for inkjet cartridges.

Uchida (US Pat 5517219) discloses an ink jet recording apparatus having an improved capping mechanism.

Berg et al (US Pat 6398338) discloses a cam-actuated lever capping arm.

Kinas (US Pat 5659341) discloses an adjustable position reference lever for a wiper assembly in an ink-jet printer.

Stewart et al (US Pat 5455608) discloses a pen start up algorithm for black and color thermal ink-jet pens.

Grange (US Pat 5440331) discloses a printhead servicing apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S Liang whose telephone number is (703) 305-4754. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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February 7, 2003


John Barlow
Supervisory Patent Examiner
Technology Center 2800